

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A circuit board, comprising:
 - a circuit board portion having a top surface, a bottom surface, a signal layer, a ground layer, and dielectric material that physically separates the signal layer and the ground layer; and
 - a signal launch having:
 - a signal via that physically contacts a signal conductor of the signal layer and the dielectric material of the [section of] circuit board portion [material], the signal via extending entirely through the circuit board portion from the top surface of the circuit board portion to the bottom surface of the circuit board portion, and
 - a first set of ground vias and a second set of ground vias that physically contact a ground conductor of the ground layer and the dielectric material of the [section of] circuit board portion [material], wherein each of the first set of ground vias is disposed a first radial distance from the signal via, wherein each of the second set of ground vias is disposed a second radial distance from the signal via, and wherein the first and second radial distances are different.

2. (Currently Amended) The circuit board of claim 1 wherein the signal launch further includes:
 - a ground pad, disposed on [a] the top surface of the circuit board portion, the ground pad physically contacting each of the first and second sets of ground vias of the signal launch and the dielectric material of the circuit board portion.
3. (Currently Amended) The circuit board of claim 1 wherein the signal launch further includes:
 - a first ground pad, disposed on [a first] the top surface of the circuit board portion, the first ground pad physically contacting each of the first and second sets of ground vias of the signal launch and the dielectric material of the circuit board portion; and
 - a second ground pad, disposed on [a second] the bottom surface of the circuit board portion, the bottom surface of the circuit board portion being substantially [that is] coplanar with the [first] top surface of the circuit board portion, the second ground pad physically contacting each of the first and second sets of ground vias of the signal launch and the dielectric material of the circuit board portion.
4. (Original) The circuit board of claim 1 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein the signal via has an inner diameter that is smaller than an inner diameter of each of the first set of ground vias.

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5. (Original) The circuit board of claim 1 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein the signal via has an inner diameter that is smaller than an inner diameter of each of the second set of ground vias.
6. (Original) The circuit board of claim 1 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein each of the first set of ground vias has an inner diameter that is smaller than an inner diameter of each of the second set of ground vias.
7. (Currently Amended) The circuit board of claim 1 wherein the signal launch further includes:

a signal pin that electrically connects with and physically couples with the signal conductor of the circuit board portion through the signal via, the signal pin extending perpendicularly from a plane of the circuit board portion.
8. (Original) The circuit board of claim 7 wherein the signal pin has a diameter that is less than an inner diameter of the signal via, and wherein the signal pin connects to the signal via through a solder joint.
9. (Original) The circuit board of claim 7 wherein at least a portion of the signal pin has a diameter that is greater than an inner diameter of the signal via, and wherein the signal pin connects to the signal via in a press-fit manner.

10. (Previously Amended) The circuit board of claim 1 wherein the dielectric material of the circuit board portion separates the first set of ground vias from the signal via by less than 0.082 of an inch.
11. (Original) The circuit board of claim 1 wherein each of the first set of ground vias is disposed between the signal via and a respective one of the second set of ground vias.
12. (Currently Amended) The circuit board of claim 1 [wherein the circuit board portion includes (i) a connecting surface that faces a connector when the connector connects to the signal launch and (ii) a distal surface that faces away from the connector when the connector connects to the signal launch, and] wherein the signal conductor of the circuit board portion connects with the signal via of the signal launch at a point along the signal via that is closer to the [distal] top surface than the [connecting] bottom surface.

13. (Currently Amended) A connection system, comprising:

a circuit board that includes (i) a circuit board portion having a top surface, a bottom surface, a signal layer, a ground layer, and dielectric material that physically separates the signal layer and the ground layer, and (ii) a signal launch having:

a signal via that physically contacts a signal conductor of the signal layer and the dielectric material of the circuit board portion, the signal via extending entirely through the circuit board portion from the top surface of the circuit board portion to the bottom surface of the circuit board portion, and

a first set of ground vias and a second set of ground vias that physically contact a ground conductor of the ground layer and the dielectric material of the circuit board portion, wherein each of the first set of ground vias is disposed a first radial distance from the signal via, wherein each of the second set of ground vias is disposed a second radial distance from the signal via, and wherein the first and second radial distances are different; and

a coaxial connector that mounts to the signal launch of the circuit board in order to provide electrical access to the signal and ground conductors of the circuit board portion.

14. (Currently Amended) The connection system of claim 13 wherein the signal launch of the circuit board further includes:

a ground pad, disposed on [a] the top surface of the circuit board portion, the ground pad physically contacting each of the first and second sets of ground vias of the signal launch and the dielectric material of the circuit board portion.

15. (Original) The connection system of claim 13 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein the signal via has an inner diameter that is smaller than an inner diameter of each of the first set of ground vias.
16. (Original) The connection system of claim 13 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein the signal via has an inner diameter that is smaller than an inner diameter of each of the second set of ground vias.
17. (Original) The connection system of claim 13 wherein the first radial distance is smaller than the second radial distance such that the first set of ground vias is disposed closer to the signal via than the second set of ground vias, and wherein each of the first set of ground vias has an inner diameter that is smaller than an inner diameter of each of the second set of ground vias.
18. (Previously Amended) The connection system of claim 13 wherein the signal launch further includes:
a signal pin that electrically connects with the signal conductor of the signal layer through the signal via, the signal pin extending perpendicularly from a plane of the circuit board portion.
19. (Cancelled).
20. (Cancelled).
21. (Cancelled).

22. (Previously Added) The circuit board of claim 1 wherein the first set of ground vias includes multiple first ground vias which are substantially evenly distributed in a radial manner around the signal via, and wherein the second set of ground vias includes multiple second ground vias which are substantially evenly distributed in a radial manner around the signal via.
23. (Previously Added) The circuit board of claim 22 wherein the signal via, at least two of the first ground vias and at least two of the second ground vias are disposed co-linearly.
24. (Previously Added) The connection system of claim 13 wherein the first set of ground vias includes multiple first ground vias which are substantially evenly distributed in a radial manner around the signal via, and wherein the second set of ground vias includes multiple second ground vias which are substantially evenly distributed in a radial manner around the signal via.
25. (Previously Added) The circuit board of claim 24 wherein the signal via, at least two of the first ground vias and at least two of the second ground vias are disposed co-linearly.

26. (Previously Added) A circuit board, comprising:
- a section of circuit board material having a signal conductor, a ground conductor, and dielectric material that physically separates the signal conductor and the ground conductor; and
 - a signal launch having:
 - a signal via that physically contacts the signal conductor and the dielectric material of the section of circuit board material, and
 - a first set of ground vias and a second set of ground vias that physically contact the ground conductor and the dielectric material of the section of circuit board material, wherein each of the first set of ground vias is disposed a first radial distance from the signal via, wherein each of the second set of ground vias is disposed a second radial distance from the signal via, and wherein the first and second radial distances are different.

27. (Previously Added) A connection system, comprising:

a circuit board that includes (i) a section of circuit board material having a signal conductor, a ground conductor, and dielectric material that physically separates the signal conductor and the ground conductor, and

(ii) a signal launch having:

a signal via that physically contacts the signal conductor and the dielectric material of the section of circuit board material, and

a first set of ground vias and a second set of ground vias that physically contact the ground conductor and the dielectric material of the section of circuit board material, wherein each of the first set of ground vias is disposed a first radial distance from the signal via, wherein each of the second set of ground vias is disposed a second radial distance from the signal via, and wherein the first and second radial distances are different; and

a coaxial connector that mounts to the signal launch of the circuit board in order to provide electrical access to the signal and ground conductors of the circuit board.